patients.

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1B.17

Femoral head histology for intra-capsular neck of femur fractures

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Introduction: Intra-capsular neck of femur fractures frequently result from trauma to osteoporotic bone. In some cases the underlying pathology can be more sinister, due to metastatic disease.

When concerns are raised regarding underlying pathology, the femoral head is sent for histological analysis so that appropriate oncological management can be delivered if a malignancy is detected. Currently there are no published studies available to consider the usefulness of such investigation.

Methods: Our retrospective study analyses 100 consecutive femoral heads sent for histological analysis following hip hemiarthroplasty surgery in a single Orthopaedic unit.

Indications for requesting femoral head histology, histological results and their subsequent clinical management were analysed.

Results: Our study found 9 femoral heads with confirmed neoplastic cells. Of these: 6 were known metastatic cases; 2 provided a new diagnosis of cancer and 1 restaged an existing malignancy.

Painful weight bearing prior to the fracture appears to be a good indictor for positive femoral head histology in patients without metastatic disease.

Conclusion: Femoral head histological analysis is a useful tool in selected group of neck of femur fracture patients.

We discuss the indications for histological analysis, and encourage surgeons to consider further investigation when concerns are raised.

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1B.18

Delay to surgery in hip fracture patients: effect on mortality, length of stay, and post-operative morbidity

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Objectives: To determine whether a delay to surgery affects mortality rate, length of stay and post-operative complications following surgery for hip fracture in elderly patients.

Design: Prospective observational study.

Setting: University Hospital, Nottingham, United Kingdom.

Participants: 7207 patients who underwent hip fracture surgery from a total of 7510 patients admitted with a hip fracture.

Main outcome measures: Mortality, length of stay and post-operative complications following hip fracture surgery in relation to delay to surgery.

Results: The 30-day mortality of patients undergoing hip fracture surgery was 9.0%. At 90 days, mortality was 18.5% and at 1-year it was 31.0%. In patients declared fit for surgery on admission ($n = 5665$), 30-day mortality was 7.1% in those operated on without delay, rising to 10.3% at over 4 days delay ($p = 0.117$). However, those operated on after 5 days delay, 30-day mortality equalled 13.6% ($p = 0.009$). with over 48 h delay to surgery ($p < 0.001$).

Post-operative complications included chest, superficial wound, urinary tract, and Clostridium Difficile infections and cerebrovascular accident. No significant difference in rates of post-operative complications was seen when comparing patients operated on before and after 48 h in the fit patient group. All patients considered ($n = 7207$), an increase in the rate of chest infection [$n = 318$ (8.6%) vs. 416 (11.9%), $p < 0.001$] and Clostridium Difficile infection [$n = 14$ (0.4%) vs. 27(0.8%), $p = 0.027$) was seen when delayed by over 48 h.

Conclusions: The 30-day mortality following hip fracture surgery is 9.0%. Patients admitted without co-morbidities have no increased mortality when surgery is delayed for up to 5 days. Mortality does however significantly increase when surgery is delayed by over 5 days.

A 48-h delay to surgery significantly increases length of stay, however no correlation was seen between delay to surgery and post-operative complications in fit patients.

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1B.19

Socioeconomic status: influence on the incidence, outcome and mortality of hip fractures

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Introduction: Hip fracture is one of the most frequent clinical manifestations of osteoporosis and is a common cause of disability and death in the elderly. There is scarce evidence that looks specifically at the association between socioeconomic status (SES) and the incidence and mortality of hip fractures. This is the first study that uses the English Indices of Multiple Deprivation (IMD) 2007 which is the Government's official measure of multiple deprivation to analyse SES and hip fracture incidence and mortality.

Methods: Our sample consisted of all hospital admissions for hip fractures to Queens Medical Centre (QMC), Nottingham. Data was collected prospectively from 1999 to 2009. Information about the individual's postcode, number of co-morbidities, length of stay, type of fracture, pre and post-hospital residence and mortality were recorded. Population statistics were collected from the Nottingham Census data, together with social deprivation scores (IMD), linked to patients by individual postcodes with higher scores being associated with higher levels of deprivation (0–85). The information recorded above along with the incidence of hip fracture was analysed based on the IMD scores which were divided into quintiles, i.e. 1 (least deprived) to 5 (most deprived).

Results: There were a total of 7511 patients admitted to QMC for hip fractures between 1999 and 2009 of which 625 were excluded. The mean IMD score was 24.7 (SD 16.82) with a median of 20.11 (IQR 11.65–36.60) and a range of 0.73–78.37. Majority of the patients (27.1%) fell within the 5th IMD quintile. There was a statistically significant increase in incidence of hip fracture in the more deprived population. The mortality rate proved to be significantly higher (<0.05) in the more deprived population only at 3 years, 5 years and 7 years and not at 30 days or 1 year. There was no statistically significant increase in the number of co-morbidities or length of stay in the population with a lower socioeconomic status. Apart from their own home, majority of the patients were admitted either from a nursing home or a rehabilitation centre. Only 56% of the patients that were admitted from their own home were discharged back to their same place of residence. There were no specific trends